On page 12, please replace the sixth full paragraph, containing lines 30-38, with the following paragraph:

--Resetting is in fact not always necessary in order to maintain stability. In order to maintain stability it may only be necessary to multiply (or subtract) the state variable of the integrator by a factor which ensures that the output of the integrator will not increase in a uncontrollable way. This clamping procedure ensures that the modulator can be operated in an overload mode where it is capable of handling a signal larger than MSA. In fact it can be designed so that the maximum input can be as large as the full scale output signal level of the quantizer (assuming for simplicity that a_1 equals b_1) whereby a much larger dynamic range is obtained. Combined with the design procedure for the NTF this means that the SDM will have a much larger DNR than conventionally operated SDMs. Furthermore, much lower distortion at high output signal levels can be achieved compared to conventionally operated SDM's.--

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IN THE CLAIMS

Please cancel claims 1-35 without prejudice or disclaimer to the subject matter contained therein.

Please add new claims 36-45 as follows:

--36. A method of designing a sigma-delta-modulator comprising a plurality of cascaded integrators and a comparator for signal quantification, said integrators and comparator defining a signal path, the method comprising the steps of:

(a) providing an input signal to an input of the modulator,

(b) determining signal amplitude at one or more outputs of the integrators, and

(c) adjusting one or more signal gains along the path so that signal amplitude increases progressively along the signal path away from the input.

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37. A method according to claim 36, adjusting signal gains on the two cascaded integrators immediately after the input, said two integrators being subject to adjustment in step (c).

38. A method according to claim 37, wherein signal amplitudes arising at outputs of said two cascaded integrators are less than 20% of a full scale output from said comparator.

39. A method according to claim 36, wherein the signal gains are adjusted by adjusting gains of said integrators.

40. A method according to claim 39, wherein the gains of said integrators are adjusted by adjusting feedback therearound.

41. A sigma-delta-modulator designed according to the method of claim 36.

42. A method of controlling a sigma-delta-modulator comprising a plurality of cascaded integrators, a comparator for signal quantification, and controlling means, the method comprising the steps of:

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- monitoring the signal swing of an output signal of at least one of the plurality of integrators and determining if the monitored signal swing exceeds a predefined threshold value, and
- in case the monitored signal swing exceeds the predefined threshold value, using the controlling means to reduce the output signal by a predefined factor or value so as to bring the monitored signal swing below the predefined threshold value, the predefined threshold value being associated with a maximum stable input amplitude of the sigma-delta-modulator.

43. A microphone module comprising a sigma-delta-modulator according to claim 41.